AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method for processing audio signals comprising:

quantizing the audio signals in spectral lines into quantized data in a plurality of sub-bands in an order of most significant bits to least significant bits;

determining, according to a psychoacoustic model, a plurality of scale factors corresponding to ~~each of~~ the plurality of sub-bands according to respective noise tolerance of each of the sub-bands;

for each scale factor that exceeds a threshold value, bit shifting the quantized data in the corresponding sub-band ~~sub-bands~~ by the ~~respective~~ scale factor~~s if they exceed a threshold value~~;

coding the quantized data; and

truncating the quantized data.

2. (Original) The method of claim 1 further comprising:

de-shifting the coded data;

de-quantizing the coded data; and

decoding the coded data.

3. (Original) The method of claim 2 further comprising:

amplifying the quantized data with the respective scale factors; and

de-amplifying the decoded data with the respective scale factors.

4. (Original) The method of claim 2 further comprising determining a difference of the quantized data and the de-quantized data.

5. (Original) The method of claim 1 further comprising coding the quantized data in a base layer and an enhancement layer.

6. (Original) The method of claim 5 further comprising truncating the quantized data in the enhancement layer up to respective layer size limits.

7. (Original) The method of claim 1 further comprising one of Huffman coding, run length (RL) coding or arithmetically coding the quantized data.

8. (Previously Presented) The method of claim 1, wherein the scale factor of a sub-band is determined based upon an original spectral energy level, a common scale factor, and band scale factor values of the sub-band.

9. (Original) The method of claim 1 further comprising converting the audio signals from a time domain to a frequency domain.

10. (Original) The method of claim 2 further comprising converting the decoded data from a frequency domain to a time domain.

11. (Currently Amended) A scale factor based bit shifting (SFBBS) system having an encoder and decoder ~~processing~~ to process audio signals, comprising:

an encoder including

a quantizer ~~quantizing~~ to quantize the audio signals in spectral lines into quantized data in a plurality of sub-bands in an order of most significant bits to least significant bits;

a psychoacoustic model ~~determining~~ to determine a plurality of scale factors corresponding to ~~each of~~ the plurality of sub-bands according to respective noise tolerance of each of the sub-bands;

a coder ~~coding~~ to code the quantized data;

a de-quantizer ~~de-quantizing~~ to de-quantize the quantized data;

a subtractor ~~taking~~ to take a difference of the quantized data and the de-quantized data;

a bit shifter ~~shifting~~ to shift the difference by the corresponding scale factor in each of the sub-bands in which the corresponding scale factor exceeds a threshold value ~~by the respective scale factors if the exceed a threshold value~~; and

a bit slicer ~~coding and truncating~~ to code and truncate the difference.

12. (Currently Amended) The system of claim 11 further comprising:

a decoder having

a scale factor decoder ~~decoding~~ to decode the scale factors;

a spectrum decoder ~~decoding~~ to decode the quantized data;

a de-shifter ~~de-shifting~~ to de-shift the coded data; and

a decoder ~~decoding~~ to decode the coded data.

13. (Currently Amended) The system of claim 11, the encoder further comprising a filter ~~converting~~ to convert the quantized data from a time domain to a frequency domain.

14. (Currently Amended) The system of claim 12, the decoder further comprising a filter ~~converting~~ to convert the decoded data from a frequency domain to a time domain.

15. (Currently Amended) The system of claim 12, the decoder further comprising an adder ~~adding~~ to add the decoded data.

16. (Original) The system of claim 12 wherein the quantized data are amplified and, the decoded data de-amplified, with the respective scale factors.

17. (Currently Amended) The system of claim 11 further comprising one of a run length (RL) encoder, Huffman encoder or bit slice arithmetic encoder ~~coding~~ to code the quantized data.

18. (Original) The system of claim 11 being implemented in an additive fine granularity scalability (FGS) structure.

19. (Original) The system of claim 11 wherein the least significant bits are discarded after the bit shifting.

20. (Original) The system of claim 11 wherein the quantized difference is coded in a base layer and an enhancement layer, and the quantized difference in the enhancement layer is truncated up to respective layer size limits.

21. (Currently Amended) A method for processing audio signals comprising:

quantizing the audio signals in spectral lines into quantized data in a plurality of sub-bands in an order of most significant bits to least significant bits;

determining, according to a psychoacoustic model, a plurality of scale factors corresponding to ~~each of~~ the plurality of sub-bands according to respective noise tolerance of each of the sub-bands;

for each scale factor that exceeds a threshold value, bit shifting the quantized data in the corresponding sub-band ~~sub-bands~~ by the ~~respective~~ scale factor~~s if they exceed a threshold value~~;

coding the quantized data in a base layer; and

truncating the quantized data.

22. (Original) The method of claim 21 further comprising:

de-shifting the coded data;

de-quantizing the coded data; and

decoding the coded data.

23. (Original) The method of claim 21 further comprising discarding the least significant bits after the bit shifting.

24. (Original) The method of claim 21 further comprising:

coding the quantized data in a base layer and an enhancement layer; and

truncating the quantized data in the enhancement layer up to respective layer size limits.

25. (Original) The method of claim 21 further comprising one of Huffman coding, arithmetically coding or run length (RL) coding the quantized data.

26. (Previously Presented) The method of claim 21, wherein the scale factor of a sub-band is determined based upon an original spectral energy level, a common scale factor, and band scale factor values of the sub-band.

27. (Original) The method of claim 21, the method being implemented in an additive fine granularity scalability (FGS) structure.

28. (Currently Amended) A scale factor based bit shifting (SFBBS) system having an encoder and decoder ~~coding~~ to code and decode, respectively, audio signals, wherein the encoder comprises ~~comprising~~:

~~an encoder further comprising~~

a quantizer ~~quantizing~~ to quantize the audio signals in spectral lines into quantized data in a plurality of sub-bands in an order of most significant bits to least significant bits;

a psychoacoustic model ~~determining~~ to determine a plurality of scale factors corresponding to each of the sub-bands according to respective noise tolerance of each of the sub-bands;

a bit shifter ~~shifting~~ to shift the quantized data by the corresponding scale factor in each of the sub-bands in which the corresponding scale factor exceeds a threshold value ~~by the respective scale factors if the exceed a threshold value~~; and

a bit slicer ~~coding and truncating~~ to code and truncate the quantized data.

29. (Currently Amended) The system of claim 28, ~~further comprising:~~

~~a~~ wherein the decoder ~~further comprising~~ comprises:

a scale factor decoder ~~decoding~~ to decode the scale factors;

a spectrum decoder ~~decoding~~ to decode the quantized data;

a de-shifter ~~de-shifting~~ to de-shift the coded data; and

a decoder ~~decoding~~ to decode the coded data.

30. (Original) The system of claim 28 being implemented in MPEG-4 bit slice arithmetic coding (BSAC).

31. (Currently Amended) A method for processing audio signals, comprising:

quantizing the audio signals in spectral lines into quantized data in a plurality of sub-bands in an order of most significant bits to least significant bits;

determining, according to a psychoacoustic model, a plurality of scale factors corresponding to each of the sub-bands according to respective noise tolerance of each of the sub-bands;

de-quantizing the quantized data;

for each scale factor that exceeds a threshold value, bit shifting the quantized data in the corresponding sub band ~~sub-bands~~ by the ~~respective~~ scale factor~~s if they exceed a threshold value~~; and

coding and truncating the quantized difference.

32. (Original) The method of claim 31 further comprising:

de-shifting the coded data; and

decoding the coded data.

33. (Original) The method of claim 32 further comprising:

amplifying the quantized data with the respective scale factors; and

de-amplifying the decoded data with the respective scale factors.

34. (Original) The method of claim 31 further comprising one of Huffman coding, run length (RL) coding or arithmetically coding the quantized data.

35. (Original) The method of claim 31 wherein the least significant bits, after the bit shifting, are discarded.

36. (Currently Amended) A scale factor based bit shifting (SFBBS) processor for processing audio signals in an order of most significant bits to least significant bits, the processor comprising:

a psychoacoustic module ~~determining~~ to determine a plurality of scale factors corresponding to a plurality of spectral sub-bands according to respective noise tolerance of each of the sub-bands;

a bit shifter ~~shifting~~ to shift the processed audio signals by the corresponding scale factor in each of the spectral sub-bands in which the corresponding scale factor exceeds a threshold value ~~by the respective scale factors if they exceed a threshold value~~; and

a bit slicer ~~coding and truncating~~ to code and truncate the processed audio signals.

37. (Currently Amended) The processor of claim 36 further comprising a quantizer ~~quantizing~~ to quantize the processed audio signals.

38. (Currently Amended) The processor of claim 36 further comprising

a quantizer ~~quantizing~~ to quantize the processed audio signals;

a de-quantizer ~~de-quantizing~~ to de-quantize the processed audio signals; and

a subtractor ~~taking~~ to take a difference between the quantized audio signals and the de-quantized audio signals.

39-40. (Canceled).